



Invasive Tree Control for Rangelands

PURPOSE:

Eastern red cedar, Osage orange, honey locust, Siberian elm, autumn olive, and Russian olive are invasive trees that can take over native Kansas prairies when left unchecked (*Figure 1*). Whether these trees are found on short grass, mid-grass, or tall grass prairies, they are negatively impacting grassland dependent wildlife.

Typically, the presence of these woody plants on rangelands signifies that the use of prescribed fire has been greatly reduced or eliminated on the site. The lack of fire along with heavy grazing pressure allows these undesirable woody plants to gain a foothold on Kansas rangelands. If left untreated, these woody plants can dominate the grassland resulting in a loss of available nesting and brood-rearing habitat over time.

Cattle forage also declines as trees displace native grasses and forbs. By removing invasive woody vegetation, adding prescribed fire, and using proper stocking rates, invaded prairies can be restored to a healthy grassland benefiting wildlife and livestock.



Figure 1. Trees invading tall grass prairie.



Figure 2. Left before treatment, right after treatment.

SPECIFICATIONS:

- Consider the density of invading trees before selecting which method will be used to control the trees.
- The cheapest way to control invasive trees is regular intervals of prescribed burning, especially in areas with scattered trees or low tree density. Prescribed fire will stay ahead of the problem before more expensive methods of control are needed.
- Use of a high speed rotary saw mounted on a skid loader is preferred in medium to high infestation rates due to the higher efficiency and ability to cut trees at ground level (*Figure 2*).
- Cut stumps should immediately be treated with herbicide containing Triclopyr to prevent re-sprouting. Follow label recommendations for appropriate rates and use.
- Eastern red cedar stumps do not need to be treated when cut below the lowest branch with green growth.
- Leave scattered shrubby islands such as plum, sumac, and dogwood for quail covey headquarters.

SPECIFICATIONS:

- Desirable trees should primarily be left along streams and river corridors.
- Push cut trees into dense piles, and wait 6 to 12 months before conducting a prescribed burn to allow material to cure.
- Dense piles and other volatile fuels (e.g. red cedar trees) should be kept at least 100 feet away from firebreaks.

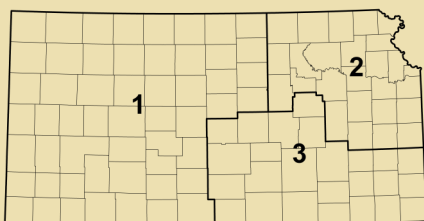
MAINTENANCE:

- Spot spraying and/or selective cutting of re-sprouting invasive tree seedlings must be conducted to prevent re-infestation.
- Native Kansas rangelands are fire dependent communities and prescribed burning is required when restoring and maintaining grasslands.
- Prescribed burns multiple years in a row may be needed on a heavily infested range to help set back the woody encroachment.
- Once the woody invasion is under control, maintenance burns should be conducted once every 3 to 4 years in eastern Kansas and decreases to once every 5 to 10 years in extreme western Kansas. This fire return interval will vary depending on location, history of fire use, level of woody encroachment, and fuel load.
- If proper burning conditions exist, consider conducting a summer burn for improved control of invasive trees (*Figure 3*).



Figure 3. A summer burn used to control Eastern red cedar.

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